78-Ida-0540 (USFS Pathology Project Chatcolet #2)

Classification -- loamy-skeletal, mixed, frigid Dystric Xerochrept.

General Site Chracteristics

Location -- Benewah County, Idaho, SE¼ of section 10, T.46n., R.3W., just inside the eastern boundary of Heyburn State Park across the highway from the garbage can pull-out and about 40 meters uphill; described -- September 15, 1978, by Tom Dechert and John Craighead; topography -- moderately rolling mountain foothills, side slope of a secondary ridge, straight position about one tenth up a 150 meter long slope; slope -- 40 percent; aspect -- southeast 130 degrees; elevation -- 670 meters (2200 feet); parent material -- colluvium and residuum of the striped peak formation, gray to green to purplish-red siltite altered to a punky, bleached rock of faded red to cream color; climate -- subhumid with cool dry summers and cool wet winters, mean anual precipitation of 65 cm. (25 in.) mean annual temperature of 8.5° C (47.5° F); drainage -- somewhat excessively well drained; runoff -- slight; permeability -- moderately rapid; erosion -- some due to logging and fire; vegetation and use -- Abies grandis - Pachistima myrsinites habitat type, with Pseudotsuga menziesii, Pinus ponderosa, Physocarpus malvaceous, Symphoricarpus alba, Berberis repens, Holodiscus discolor, Smilacina stellata, Coptis occidentalis, Viola orbiculata, Lonicera utahensis, Prunus virginiana, Acer glabrum, Amelanchier alnifolia, Galvium triflorum, used as a State Park.

Remarks: Site #1 is up the hill 25 meters and both are in a Poria center. This site (#2) is closer to the bottom of a draw and is probably more moist. Climatic data are those of St. Maries and should closely approximate those of this site. The vegetation is in an early successional state, apparently in a comeback from the 1910 fire. (See other remarks for Chatcolet #1)

Pedon Description

01 1-0 inches. Partially decomposed leaves, needles and twigs.

A11 0-4 inches. Grayish brown to dark grayish brown (10YR 4.5/2) very gravelly silt loam, very dark grayish brown to very dark brown (10YR 2.5/2) moist; strong, fine granular structure; weakly friable, slightly sticky and slightly plastic; many fine and medium interstitial pores; abundant very fine, fine and medium roots; no clay films; no concretions; 87 percent gravel; clear smooth boundary.

A12 4-8 inches. Brown to dark brown (10YR 4/3) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate, fine, granular structure; friable, slightly stickyand slightly plastic; common, very fine, fine and medium interstitial and tubular pores; plentiful, very fine, fine and medium roots; no clay films; no concretions; 83 percent gravel; clear smooth boundary.

B2 8-18 inches. Pale brown (10YR 6/3) very gravelly silt loam, dark yellowish brown (10YR 4/4) moist; moderately fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine and medium interstitial and tubular pores; plentiful, very fine, fine and medium roots; no clay films; no concretions; 76 percent gravel, an estimated 20 percent cobbles; gradual smooth boundary.

78-Ida-0540 (cont.)

B2 8-18 inches. Pale brown (10YR 6/3) very gravelly silt loam, dark yellowish brown (10YR 4/4) moist; moderately fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine and medium interstititial and tubular pores; plentiful, very fine, fine and medium roots; no clay films; no concretions; 76 percent gravel, an estimated 20 percent cobbles; gradual smooth boundary.

C1 18-32 inches. Light yellowish brown (10YR 6/4) very gravelly silt loam, yellowish brown (10YR 5/6) moist; moderate, fine subangular blocky structure; slightly hard, slightly sticky and slightly plastic; common very fine, fine and many medium pores; plentiful, very fine and fine roots; no clay films; no concretions; 71 percent gravel, an estimate of 20 percent cobbles; the C1 shows some characteristics of a B2, especially in structure; however, most of the structure seems to be a function of the high rock content and the compaction of the soil between the rocks; gradual wavy boundary.

Cr 32-40+ inches. Very pale brown (10YR 7/3) very gravelly silt loam, yellowish brown (10YR 5/4) moist; weak, fine granular structure; massive, nonsticky and nonplastic; 63 percent gravel.

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Date: October 1978

Sample No.	Horizon	Depth	pH paste	ECX10^3	PW at Saturation	Available P	Sesquioxides			
							Di-Citrate Fe	Extract Al	Pyrophosphate Fe	Extract Al
		in		mmhos/cm	%	ppm	%			
RW-17	A11	0-4	6.5	0.3	76	47.5	ND	ND	ND	ND
18	A12	4-8	6.6	0.3	75	38.0	ND	ND	ND	ND
19	B2	8-18	6.5	0.3	52	31.5	ND	ND	ND	ND
20	C1	18-32	6.6	0.2	53	20.0	ND	ND	ND	ND
21	Cr	32-40+	6.6	0.1	37	4.6	ND	ND	ND	ND

Sample No.	Exchangeable Ions				Ext. Acidity	CEC	Base Saturation	OM	C	N	C:N	Soil Fraction	NaF pH
	Ca	Mg	Na	K	H								
	meq/100 gms						%	%			ratio		
RW-17	16.4	1.8	0.2	1.7	11.2	34.5	64	10.7	6.2	0.28	22	0.13	8.1
18	11.8	1.3	0.3	1.1	11.0	30.5	57	3.9	2.3	0.20	12	0.17	8.0
19	8.0	1.1	0.1	1.0	8.1	18.4	56	2.9	1.7	0.11	15	0.24	8.0
20	6.1	1.0	0.3	1.4	6.9	16.2	56	2.0	1.2	0.07	17	0.29	7.9
21	4.1	0.7	0.2	0.6	4.1	7.7	58	0.7	0.4	0.05	8	0.37	7.2

Remarks: CEC - 10% acidified NaCl leachate ran on Technicon
Total N - ran on Technicon
NS - no sample
ND - not determined

Analysis by: Debbie Hall

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Depth	Particle Size Distribution (mm) VCS 2-1.0	CS 1-0.5	MS 0.5-0.25	FS 0.25-0.1	VFS 0.1-0.05	TS 2-0.05	TSi 0.05-0.002	TC < 0.002	Gravel & Stone > 2 mm wt.	vol.	Textural Classes
in	%								%		
0-4	2.72	1.99	0.99	2.89	6.53	15.11	69.62	15.26	87	†75	V. gr. silt loam
4-8	2.71	2.27	1.25	3.00	6.03	15.25	68.93	15.81	83	†72	V. gr. silt loam
8-18	2.19	2.81	1.76	3.47	8.61	18.83	67.22	13.95	76	**65	V. gr. silt loam
18-32	1.54	2.08	1.29	3.63	9.31	17.85	66.79	15.36	71	†56	V. gr. silt loam
42-40+	1.45	1.83	1.52	4.41	12.53	21.74	70.74	7.52	63	†54	V. gr. silt loam

Depth	Silt Size Distribution (mm) CoSi 0.05-0.02	MSi 0.02-0.005	FSi 0.005-0.002	Bulk Density	Water Content 3 Bar	1/3 Bar	15 Bar	5 Bar	Plastic Limit	Plastic Index
in	%			g/cc	%				%	
0-4				†1.2	19.6	42.0	18.7	19.9		
4-8				†1.4	18.6	37.1	16.8	18.3		
8-18				**1.5	13.6	28.9	12.6	13.2		
18-32				†1.4	12.9	28.6	11.9	12.9		
32-40+				†1.8	9.2	24.0	7.9	8.8		

Remarks: Centrifuge method, 5% sodium hexametaphosphate added, sonified.
** - actual bulk density and % volume.
† - estimated field bulk density and % volume.

Analysis by: Debbie Hall
Anita Falen - 1/3, 3, 5, & 15 Bar